

records of the Hudson's Bay Company fishery started in the 1880's and abandoned in the 1930's indicates that catches may decline after a period of fishing. It is hoped that by employing university students to assist with the project accurate records can be obtained of the size and age composition of the catches

and that a careful watch can be maintained on any effects of the planned fishery.

I should like to thank both the Arctic Institute of North America and the Provincial Department of Fisheries of Quebec for the financial support that made this work possible. G. POWER

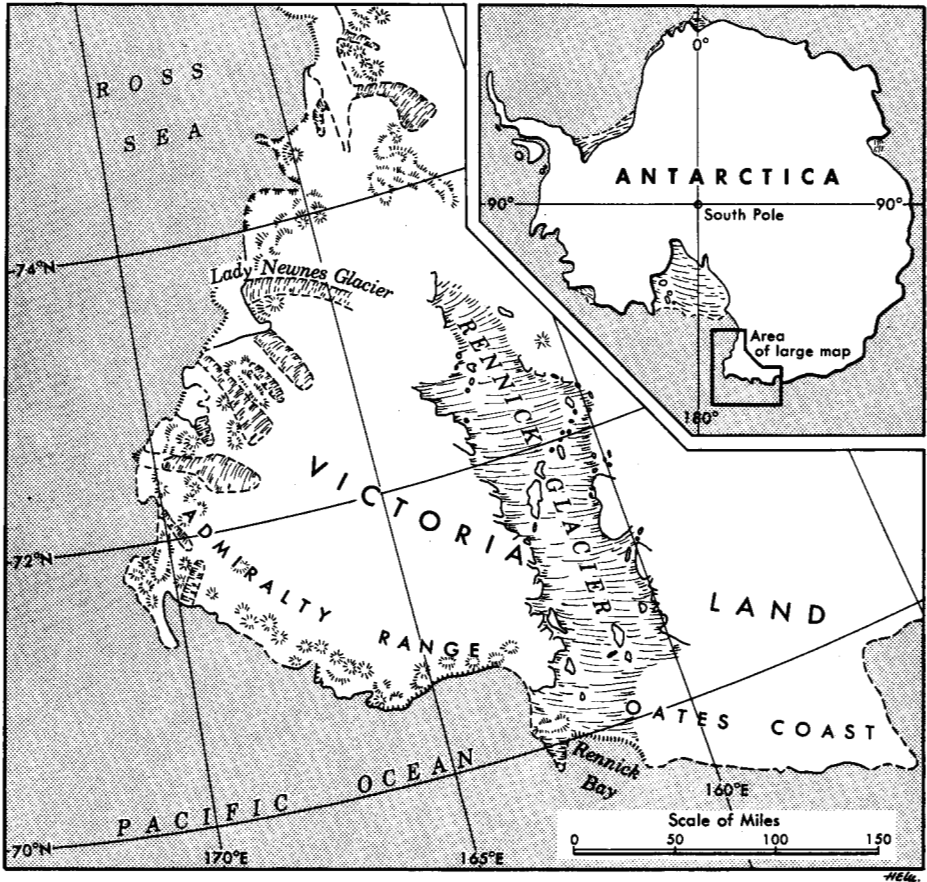


Fig. 1. Sketch map showing the newly discovered Rennick Glacier flowing into Rennick Bay, Victoria Land.

## TWO RECENTLY DISCOVERED GLACIERS, ANTARCTICA

The purpose of this paper is to make available preliminary information on two recently discovered glaciers in Victoria Land, Antarctica.

As a continuation of the International

Geophysical Year scientific effort in Antarctica, two ground traverses were organized by the United States Antarctic Research Program and administered by the Arctic Institute of North America. The first of these traverses left Scott Base on October 16, 1959 in three tracked Sno-Cats, traversing parts of

the Ross Ice Shelf, the Skelton Glacier, Victoria Land, and Wilkes Land.

During the aerial evacuation of the traverse group, consisting of F. G. vander Hoeven, A. W. Stuart, A. J. Heine, W. M. Smith, L. J. Roberts, T. Baldwin, A. R. Taylor, W. A. Jackman, C. Lorius, and J. G. Weihaupt, early in 1960, an aerial photo reconnaissance was made from  $72^{\circ}38.0'S$ - $161^{\circ}31.8'E$ . to Rennick Bay on the Oates Coast of the Antarctic Continent. During the reconnaissance, a new and sizeable glacier was discovered that terminates in the vicinity of Rennick Bay. During an earlier photo reconnaissance a second and smaller glacier was discovered flowing east, terminating in the vicinity of Lady Newnes Ice Shelf in the Ross Sea<sup>1, 2</sup>.

finer mountains to the east. The most prominent of the tributaries enters from the southeast in the area of  $72^{\circ}00'S$ .  $160^{\circ}30'E$ . and is perhaps 8 km. in width. The width of the main glacier varies from 50 to 80 km., the broadest area occurring at  $72^{\circ}00'S$ ., where it assumes the appearance of a broad, relatively flat ice-filled valley.

On the west, the glacier is bounded by relatively low lying and widely spaced mountains and nunataks, that separate it from the Victoria Land Plateau proper, thereby defining an irregular limit on that side of the glacier. These mountains appear to be geologically different from those found on the eastern side (Fig. 2.), where the glacier is sharply delineated in a comparatively straight north-south line. The mountains there



Fig. 2. View over Rennick Glacier. Eastern limit is defined by prominent mountains, background. (U.S. Navy photo).

### Rennick Glacier<sup>3</sup>

The head of the Rennick Glacier is believed to be located slightly south of the last station occupied by the Victoria Land ground party at  $72^{\circ}38.0'S$   $161^{\circ}31.8'E$ . Although the party was unable to continue south of this point, due to the lateness of the season, the glacier appeared to the naked eye to continue at least 50 km. in that direction, indicating a minimum length of 260 km. (Fig. 1.) Many tributary glaciers were noted, the more distinguishable ones entering the main valley from high, well de-

are higher, they rise directly out of the glacial valley and occupy a large region east of the glacier, whereas the western line of mountains is interspersed with broader tributary glaciers. In the area of  $71^{\circ}50'S$ . a large nunatak temporarily divides the glacier as it flows north. This feature appears to be geologically similar to the mountains east of the glacier. To the south and southeast the mountains are sedimentary, whereas meta-sedimentary types were seen on ground examination of exposures on the west side of the glacier near  $72^{\circ}00'S$ .

A prominent altitude drop takes place at  $72^{\circ}00'S.$  as the glacier moves toward the coast (Fig. 3). Between  $72^{\circ}00'S.$  and  $71^{\circ}30'S.$ , a distance of 55.5 km., the altitude decreases 1250 m. as indicated by aircraft altimetry. As this type of measurement is subject to some error, the true figure may be slightly more conservative, although there is no question of a major altitude change in this area. The maximum altitude of the glacier is probably in the range of 1500 to 2000 m., except near its western lateral limits where it fuses with the Victoria Land Plateau, which rises to over 2300 m. near the upper limits of the glacier. Near  $71^{\circ}20'S.$  the surface of the glacier approaches sea-level, maintaining this general altitude to the coast.

glaciers, as indicated in Fig. 1 are based on sketches, done during the reconnaissance flight, that have been used in conjunction with 58 overlapping, oblique aerial photographs. The resulting outlines and positions of these features are approximate, although the scale and general outline are believed to be reasonably close. As the flight run originated over a position fixed by solar observation, it is believed that the plot for the seaward end of Rennick Glacier is more nearly correct than that inferred from existing maps.

### Lady Newnes Glacier<sup>3</sup>

Lady Newnes Glacier, although reasonably well fixed, is not as well defined

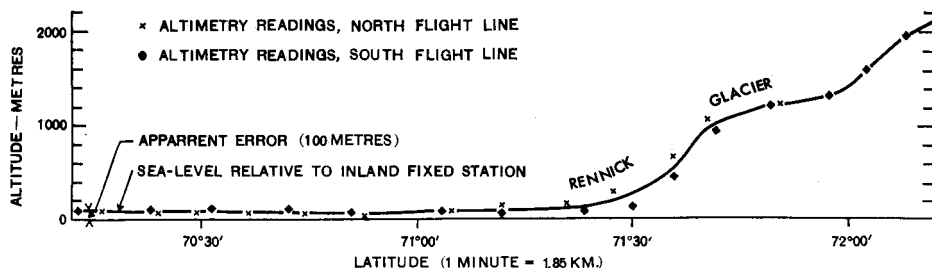


Fig. 3. Cross-section of Rennick Glacier (looking east), showing altitude profile as determined from aircraft altimetry.

The comparative volumes of ice contributed by either side could not be accurately estimated at the time of the reconnaissance, although that contributed from the western side, and therefore from the Victoria Land Plateau, is in the form of broad, less distinct glaciers, suggesting a greater supply from that source.

On reaching the coast the aircraft flight line as plotted did not coincide with the center of Rennick Bay on existing maps, although the aircraft was over the center of the bay. Fig. 1 shows the configuration and location of Rennick Glacier and its terminus in Rennick Bay, indicating a substantially larger mouth than was previously thought. It is important here to point out that the lateral limits of the glacier, including tributary

as the Rennick Glacier and is smaller in extent. It was observed only briefly and neither sketches nor usable photographs are available. Its origin is believed to be in the area of  $73^{\circ}S. 163^{\circ}E.$  from which it flows to a point around  $73^{\circ}21'S. 165^{\circ}00'E.$ , then into the Lady Newnes Ice Shelf, its lower limits passing between Mount Muchison and Mount Monteagle. Its total length is estimated to be 115 km.

Whereas the Lady Newnes Glacier was observed flowing east to the Ross Sea, the upper limits of the Priestley Glacier were reported by the pilot to extend north from the Priestley's terminus in the area of the foot of the Reeves Glacier, to approximately  $73^{\circ}30'S. 163^{\circ}15'E.$  near the origin of the Lady Newnes Glacier. This suggests a common general

area of origin for the Lady Newnes, Priestley, and Rennick Glaciers.

The author appreciates aerial photographs made available by the U. S. Navy for this report. Thanks are extended to Lt. Commander Dale, pilot of the aircraft and to the VX-6 Squadron of Task Force 43, whose initiative is responsible for the discovery of these features.

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<sup>1</sup>Klimov, L. B., and Solovyev, D. S. 1960. Correlation of geological formations of the shore of Ross Sea and Oates Coast. Inform. Bull. of the Soviet Antarctic Expedition No. 16, 1960.

<sup>2</sup>Weihaupt, J. G. 1960. Reconnaissance of a Newly Discovered Area of Mountains, Antarctica. J. Geol. 68:669-73.

<sup>3</sup>Suggested name for the newly discovered glacier, not yet approved by the Board on Geographic Names.

## INSTITUTE NEWS

### The Institute Library: annual report for 1960

The past year has been one of continued growth and service.

The Library now contains 4470 bound volumes, 589 having been added during the past year; 517 reprints and pamphlets were received and 1937 periodicals; 357 serials are currently being received regularly; 186 volumes were bound or rebound.

The public catalogue had 5876 cards added to it, this was almost twice as many as last year and brings the total to 30,488 cards; 1106 cards were sent to the Union Catalogue of the National Library in Ottawa, and 1265 publications were catalogued — 26 per cent more than in the previous year.

With the ever increasing interest in the polar regions the resources of the Library are being called upon more and more to help in solving problems of great variety. Though no count is kept of the reference questions dealt with in the Library, a substantial and increasing amount of the time of the librarian is spent in tracking down information for the Institute staff, university students, authors of polar books, companies, and people who are "interested in the North".

Although material on all arctic subjects and regions is being collected, particular efforts are being made to increase the holdings of Russian material. It has been possible to enter into exchange agreements with 11 Russian agencies, who send regularly 23 Russian serials and almost one-quarter of the total number of volumes received were published in Russia. *Arctic* is sent on exchange to libraries and polar institutes in Argentina, Australia, Belgium, Denmark, France, Germany, Italy, Norway, United Kingdom, and United States of America, as well as to libraries in Brazil, Finland, Greenland, Iceland, Japan, Mexico, New Zealand, Poland, Spain, Sweden, Switzerland, Union of South Africa, and Yugoslavia.

Early in February a general meeting of the Quebec Library Association was held in the Institute. Mr. Gordon Lowther of the McCord Museum, McGill University, spoke to the members on the history of archaeological research in the North American Arctic.

In June a joint meeting of the Canadian Library Association and the American Library Association was held in Montreal. The Institute's Library was one of the two special libraries listed in the ALA's program as being of interest.